MOSQUITO STUDIES (Diptera, Culicidae)

XI. MOSQUITOES ORIGINALLY DESCRIBED FROM ARGENTINA, BOLIVIA, CHILE, PARAGUAY, PERU, AND URUGUAY[1]

By

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This is the fourth in a series of papers providing information on the source of the original type material of mosquitoes described from the Americas (Belkin, Schick and Heinemann, 1965, 1966; Peters, 1968). The concluding paper on species described from Brazil and unspecified localities in South America is in preparation. For explanation of the arrangement and method of presentation, the first paper of the series should be consulted.

We are most grateful to Osvaldo H. Casal of the Instituto Nacional de Microbiología, Buenos Aires, for his careful study of the type material in Argentina and for allowing us to publish his lectotype designations in this paper. We also thank Alan Stone for information on material contained in the U. S. National Museum.

ARGENTINA

List of Species

1. Anopheles (A.) annulipalpis Lynch Arribálzaga, 1878. TYPE: ♀, Baradero (Buenos Aires), Apr 1878 (NE, according to O. H. Casal). BIONOMICS: [Larvae in semipermanent turbid ground water with scanty vegetation.]

2. Anopheles (A.) holmbergi Del Ponte & Heredia, 1945 [=fluminensis]. TYPE: Holotype ♂ (378) with genitalia slide (2293), Corpus, San Ignacio (Misiones), May 1944, R. L. Heredia (INM). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

*3. Anopheles (A.) argentinus (Brèthes, 1912) [=pseudopunctipennis]. TYPE: Lectotype ♂, bearing label by Brèthes, //Proterorhynchus argentinus Brèthes, type, Tucumán// (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae in small streams in mountains and foothills; water fresh, with moderate flow, and containing algae.]

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4. Anopheles (A.) tucumanus Lahille, 1912 [=pseudopunctipennis]. TYPE: Holotype ♀, Río Salí (Tucumán), Dinelli (NE, according to O. H. Casal). BIONOMICS: [As for 3. argentinus.]

5. Anopheles (A.) patersoni Alvarado & Heredia, 1947 [=ssp. of pseudopunctipennis]. TYPE: Eggs, Tucumán (probably NE, according to O. H. Casal). BIONOMICS: [As for 3. argentinus.]

*6. Anopheles (Nyssorhynchus) albitarsis Lynch Arribálzaga, 1878. TYPE: ♀, Baradero (Buenos Aires) [NE; original type material lost; redescription by Umana, Heredia and Siquot (1960:609-618) from type locality does not constitute a neotype designation, this material also lost]. BIONOMICS: [Larvae usually in mats of aquatic vegetation in large ponds, marshes and lagoons of overflowing rivers, and in large sunlit ground pools with vegetation.]

7. Anopheles (N.) rooti (Brèthes, 1926) [=argyritarsis]. TYPE: ♂, Tucumán, N. C. Davis; only remaining material genitalia slide in poor condition, without sidepiece, with Brèthes label, "Cellia Rooti Brèthes=argyritarsis auct. (nec R. D.), Tucumán, N. C. Davis dedit, III. 1956" (BA). BIONOMICS: [Larvae in all types of sunlit and partially shaded ground waters.]

8. Anopheles (N.) evansae (Brèthes, 1926). TYPE: Lectotype ♂ genitalia slide found in INM (returned to BA), with following Brèthes label, "Cellia evansi Brèthes=tarsimaculata auct. (nec Goeld), Tucumán, N. C. Davis ded., III. 1926, Pr. micr. An. M.," in Del Ponte's hand "384" "DP14," "DP14=?noroestensis G. y L., 1938, [signature in ink], Tipo de evansi [signature in black pencil] (BA; PRESENT DESIGNATION of O. H. Casal). BIONOMICS: [Larvae in marshes and marshy margins of clear freshwater pools, streams and lakes.]

9. Anopheles (N.) clarki Komp, 1943 [=noroestensis]. TYPE: Holotype ♂ with genitalia slide, Monteros (Tucumán), June 1940, C. A. Alvarado (USNM, 56476; apparently lost, not mentioned in Stone and Knight, 1956b). BIONOMICS: [Larvae probably in shaded fresh water in wooded swamps, pools or stagnant streams.]

*10. Anopheles (N.) bachmanni Petrocchi, 1925 [=ssp. of triannulatus]. TYPE: ♂, ♀, Corrientes, Entre Rios, Formosa (NE, according to O. H. Casal). BIONOMICS: [Larvae probably in freshwater pools and lakes, and along river margins, associated with vegetation.]

11. Anopheles (N.) perezi Shannon & Del Ponte, 1928 [=triannulatus bachmanni]. TYPE: ♀, [Finca] Santa Bárbara, Departamento de la Capital (Tucumán) (NE, according to O. H. Casal). BIONOMICS: Larvae in a lake.

12. Anopheles (N.) davisi Paterson & Shannon, 1927 [=triannulatus bachmanni]. TYPE: ♂, ♀, larvae, Tres Pozos, [near] Embarcación (Salta), 19-21 Apr 1927, Paterson, Shannon and Shannon (USNM, see Stone and Knight, 1956b: 277; INM, 1 ♀ with Shannon's labels, "House, Embarcación, Salta, 21.4.27, R. C. Shannon/Anopheles (Nyssorhynchus) davisi Pat. & Snn (Cotype)"). BIONOMICS: Larvae in very large masses of green algae in a lake.

13. Toxorhynchites (Lynchiella) cavalierii García & Casal. TYPE: Holotype ♀ with associated larval and pupal skins (c94), Puerto Iguazú about 50 m from the Hostería Ruffino (Igu 15) (Misiones), 25 June 1965, Casal, Hepper and García (INM). BIONOMICS: Larvae in a bromeliad 1 m above the ground.

14. Toxorhynchites (L.) tucumanus (Brèthes, 1926) [=guadeloupensis]. TYPE: Lectotype ♂ (1 of 6 with type labels) with following Brèthes labels, "Tucumán, 10-VII-926, E. G. Cabarrou/elevé chez moi/Megarhinus tucumanus Brèthes" (BA; PRESENT DESIGNATION of O. H. Casal). BIONOMICS: [Larvae in leaf axils of bromeliads.]

15. Toxorhynchites (L.) arborealis (Shannon & Del Ponte, 1928) [=guade-

loupensis]. TYPE: ♀, Lules (Tucumán), Shannon and Del Ponte, 22 Mar 1927 [NE, according to O. H. Casal]. BIONOMICS: Larvae in a treehole.

16. Toxorhynchites (L.) separatus (Lynch Arribálzaga, 1891) [=ssp. of haemorrhoidalis]. TYPE: Lectotype ♂ with Lynch label "Megarhina separata n. sp." and Del Ponte label "Megarhinus haemorroidalis Fabr., D. P., X-49," according to original description collected in Formosa by E. L. Holmberg (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in leaf axils of bromeliads.]

17. Toxorhynchites (L.) lynchi (Dyar & Knab, 1906) [=haemorrhoidalis separatus]. TYPE: Lectotype ♂, only specimen in collection with Lynch's label, "Megarhyna haemorroidalis Fabr.," also with Del Ponte's label, "Megarrhynus lynchi tipo, D. P. X-49," according to original description collected in Formosa by E. L. Holmberg (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [As for 16. haemorrhoidalis separatus.]

18. Trichoprosopon (Runchomyia) paranensis (Brèthes, 1910) [Distinct species, according to O. H. Casal]. TYPE: Lectotype ♀, the better of the 2 specimens bearing the following label, "Tuyuparé, 25. I. 1908, J. B./Lynchiaria paranensis" (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in leaf axils of cattails, Typha.]

19. Wyeomyia (Nunezia) lateralis Petrocchi, 1927. TYPE: ♀, Zapla (Jujuy), 16 Mar 1916, A. Neiva (NE, according to O.H. Casal). BIONOMICS: [Larvae probably in leaf axils of bromeliads.]

*20. Wyeomyia (Davismyia) petrocchiae (Shannon & Del Ponte, 1928). TYPE: Holotype ♀, Raco (Tucumán), 13 Feb 1927, Shannon and Del Ponte (USNM; see Stone and Knight, 1957b:126). BIONOMICS: [Larvae probably in treeholes.]

21. Wyeomyia (Davismyia) monoleua (Martini, 1931) [=petrocchiae]. TYPE: Holotype ♀, San José (Formosa), Oct 1925 (SMNS). BIONOMICS: [Larvae probably in treeholes.]

22. Wyeomyia (Menolepis) leontiniae (Brèthes, 1910) [=leucostigma]. TYPE: Lectotype ♀, the best of the 5 ♀, all without type label and all bearing Brèthes labels, "Tuyuparé, 25-I-1908, J. B" and "Limatus Leontiniae" (BA; PRESENT DESIGNATION of O. H. Casal). BIONOMICS: [Larvae probably in leaf axils of cattails, Typha.]

23. Wyeomyia (Dendromyia) belkini Casal & García, 1966. TYPE: Holotype ♂ with genitalia, larval and pupal skins (C57), intersection of the arroyo Ibicuy and route 101, about 20 km west of Cataratas (Igu 26) (Misiones), 26 June 1965, Hepper, García and Casal (INM). BIONOMICS: Adults taken in the forest interior during the day, probably attracted to a human host. Larvae in bamboo internodes.

24. Wyeomyia (D.) typharum (Shannon & Del Ponte, 1928) [=melanocephala]. TYPE: Lectotype ♀, bearing label probably in Del Ponte's hand "Dendromyia typharum" and also with following labels (present on other ♀), "Jujuy, Ledesma, 3.19.26/Davis and Shannon/49036" and "Metatypus" (BA; PRESENT DESIGNATION of O. H. Casal). BIONOMICS: Larvae in leaf axils of cattails, Typha.

25. Phoniomyia muehlensi (Petrocchi, 1927). TYPE: Holotype, sex unknown, Chaco, Oct-Nov 1924, J. Petrocchi (NE, according to O. H. Casal). BIONOMICS: [Larvae in leaf axils of bromeliads.]

26. Limatus exhibitor Shannon & Del Ponte, 1928 [=durhamii]. TYPE: Lectotype ♂ with following label, "Iguazú, Mis.[iones] 18. 6. 27, Shannon & Del Ponte" and in Shannon's hand, "Limatus exhibitor Snn & D. P" (INM; PRESENT DESIGNATION of O. H. Casal). BIONOMICS: [Larvae in broken bamboo and in artificial containers at the type locality (O. H. Casal).]

27. Sabethes (S.) neivai Petrocchi, 1927 [=albiprivus]. TYPE: Holotype ♀, Santa Clara (Jujuy), May 1916, Arturo Neiva (NE, according to O. H. Casal). BIONOMICS: [Larvae probably in treeholes or bamboo internodes.]

28. Coquillettidia (Rhynchotaenia) fasciolata (Lynch Arribálzaga, 1891). TYPE: Originally described from ♀ from Navarro (Buenos Aires), Mar 1886, F. Lynch (NE), neotype ♀, Parque Lezama, Capital Federal (Buenos Aires), 13 Dec 1928, Carillo (INM; designation of Castro and Bressanello, 1952:232). BIONOMICS: [Larvae probably on rootlets of grasses and herbaceous vegetation in mud and fine sediment in very shallow water on the margins of swamps, ponds or streams.]

29. Coquillettidia (Rhynchotaenia) araozi (Shannon & Del Ponte, 1928) [= venezuelensis]. TYPE: ♀, Ledesma (Jujuy), 20 Mar 1926, Davis and Shannon; no specimens of type series in BA, according to O. H. Casal (USNM; lectotype to be designated by Alan Stone). BIONOMICS: [Larvae probably as for 28. fasciolata.] ♀ taken on animal bait.

30. Uranotaenia lanei Martínez & Prosen, 1953. TYPE: Holotype ♀, Formosa (BA, according to O. H. Casal). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

31. Uranotaenia monilis Shannon & Del Ponte, 1928. TYPE: Lectotype ♀ bearing the labels "Resistencia, Chaco, 20.2.27, R.C. Shannon/Uranotaenia monilis Snn. & D. P." in Shannon's hand (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in large lowland swamps or in other sunlit ground waters with some aquatic vegetation.]

*32. Uranotaenia nataliae Lynch Arribálzaga, 1891. TYPE: Lectotype adult, only the thorax and first abdominal segment remaining, with a label by Lynch "Uranotaenia nataliae n. sp., Tigre" [at the confluence of the Río Las Conchas and Río Paraná (Buenos Aires), Enrique Lynch, brother of Félix] (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in large open swamps with abundant aquatic vegetation such as Pistia and sedges.]

33. Uranotaenia capitis Shannon & Del Ponte, 1928. TYPE: Holotype ♀, Ledesma (Jujuy), 20 Mar 1926, Davis (USNM). BIONOMICS: [As for 32. nataliae.]

*34. Uranotaenia pulcherrima Lynch Arribálzaga, 1891. TYPE: ♂, [probably] bank of Río Luján (Buenos Aires), E. L. Holmberg (NE, according to O. H. Casal). BIONOMICS: [Larvae probably in swamps, stream margins or other permanent ground waters.]

35. Uranotaenia urania Shannon & Del Ponte, 1928 [=pulcherrima]. TYPE: Lectotype ♂ (2355) with genitalia slide, Resistencia (Chaco), 20 Feb 1927, Shannon and Del Ponte (USNM, designation of Stone and Knight, 1957c:200). BIONOMICS: [As for 34. pulcherrima.]

36. Uranotaenia elnora Paterson & Shannon, 1927 [ssp. of pulcherrima]. TYPE: Holotype ♀, Tres Pozos near Embarcación (Salta), 19 Apr 1927, Elnora S. Shannon (USNM). BIONOMICS: [Probably as for 34. pulcherrima.]

*37. Aedeomyia squamipennis (Lynch Arribálzaga, 1878). TYPE: ♂, ♀, Baradero (Buenos Aires), Apr 1878, F. Lynch (NE, according to O. H. Casal). BIONOMICS: [Larvae in lakes, ponds and permanent ground pools with abundant vegetation and algae.]

38. Psorophora (P.) lynchi Brèthes, 1916 [=ciliata]. TYPE: Lectotype ♀, the best of the 4 female syntypes in the BA, and in good condition, bearing the labels "B.[uenos] Aires, 20.II.1916, J. B./Psorophora Lynchi Br." (the other 3 females are similarly labeled) (BA; PRESENT DESIGNATION by O.H. Casal). BIONOMICS: [Larvae probably in unshaded temporary rain pools.]

39. Psorophora (P.) holmbergii Lynch Arribálzaga, 1891. TYPE: Lectotype ♀, the one specimen in the collection of the BA bearing the following label by F. Lynch, "Psorophora Holmbergi n. sp., Chaco" [Formosa], E. L. Holmberg (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae in temporary rain pools.]

40. Psorophora (P.) agoggylia Dyar, 1922 [=holmbergii]. TYPE: Lectotype ♀, Río Tapenaga, Colonia Florencia, Gran Chaco (Formosa [Santa Fe]), 1903, E. R. Wagner (USNM, 25756; designation of Stone and Knight, 1955:286). BIONOMICS: [Larvae probably in temporary rain pools.]

41. Psorophora (P.) stigmatephora Dyar, 1922 [=pallescens]. TYPE: Lectotype ♂ (1660) with genitalia slide, Río Tapenga, Colonia Florencia, Gran Chaco (Formosa [Santa Fe]), 1903, E. R. Wagner (USNM, 25756; designation by Stone and Knight, 1955:286). BIONOMICS: [Larvae probably in temporary rain pools.]

42. Psorophora (Janthinosoma) centrale Brèthes, 1910 [=ferox]. TYPE: Lectotype ♀ with the following labels, "Buenos Aires, 4.XII.1907, B./Janthinosoma centralis [sic] Brèthes" in Brèthes' hand, type locality cited as "Islas del Paraná, Buenos Aires" in the original description (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in temporary rain and floodwater pools in wooded areas.]

43. Psorophora (J.) chaquensis Paterson & Shannon, 1927 [=lutzii]. TYPE: Holotype ♀, Tres Pozos, near Embarcación (Salta), 20 Apr 1927, probably Paterson and Shannon (NE, according to Casal). BIONOMICS: [Larvae probably in temporary rain and floodwater pools in wooded areas.]

44. Psorophora (J.) bruchi Petrocchi, 1927 [=varipes]. TYPE: ♂, ♀, Provincia de Buenos Aires, 1 Apr 1925, C. Bruch (NE, according to O. H. Casal). BIONOMICS: [Larvae probably in temporary rain and floodwater pools in wooded areas.]

*45. Psorophora (Grabhamia) confinnis Lynch Arribálzaga, 1891. TYPE: Lectotype ♀, the only female of the original 5 specimens remaining in the BA, in fairly good condition, with the following label by F. Lynch, "Taeniorhynchus confinnis F. Lch., Chaco [Formosa]," E. L. Holmberg (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in open temporary ground pools of all types, especially hoofprints and road ruts.]

46. Psorophora (G.) paulli (Paterson & Shannon, 1927). TYPE: Lectotype ♀, proboscis broken, 2 legs missing and abdomen glued on a card, with the following labels in Shannon's handwriting, "Tres Pozos, Salta, 20.4.27, Shannon & Snn/Types Psorophora Paulli Paterson & Shannon" (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds or streams.]

47. Aedes (O.) meprai Martínez & Prosen, 1953 [=angustivittatus]. TYPE: Holotype ♀, Reserva Nacional "Finca del Rey," Departamento de Anta (Salta), Nov 1952, Martínez and Prosen (BA). BIONOMICS: [Larvae in temporary rain pools.] Adults captured on human bait in daytime in forest.

48. Aedes (Ochlerotatus) lynchii (Brèthes, 1910) [=crinifer]. TYPE: Lectotype ♀, the best of 9 females, in fairly good condition, all from Buenos Aires with the following labels, "6139/Buenos Aires, J. Brèthes 19.I.1903/Culex Lynchii Br.," the latter two by Brèthes (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae probably in temporary rain pools.]

49. Aedes (O.) tapinops (Brèthes, 1917) [=crinifer]. TYPE: Lectotype ♂, in fairly good condition, with the following labels by Brèthes, "S. Isidro [Buenos Aires], II.2.1917. J. B./Culex tapinops Bret." (BA; PRESENT DESIGNATION

by O. H. Casal). BIONOMICS: [Larvae probably in temporary rain pools.]

50. Aedes (O.) iguazu Shannon & Del Ponte, 1928 [=crinifer]. TYPE: ♂, ♀ [Cataratas del Iguazú], Misiones (3 ♀, without type labels but collected at Iguazu Falls by Shannon and Shannon in Oct 1927, are present in the USNM; no specimens of the type series are in the INM). BIONOMICS: [Larvae probably in temporary rain pools.]

51. Aedes (O.) araozi Shannon & Del Ponte, 1928 [=milleri]. TYPE: Lectotype ♂, in fairly good condition, with the following labels in Shannon's hand, "Quebrada San Lorenzo, Salta, 4. VIII. 27, R. C. Shannon/A. 154/Aedes araozi Shannon & Del Ponte," with genitalia slide (655) (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: Larvae in a small rockhole covered with dead leaves very near a small torrential stream.

52. Aedes (O.) patersoni Shannon & Del Ponte, 1928. TYPE: Lectotype ♀, in very bad condition, a mesothoracic leg and an antenna are missing and the mesonotum is largely rubbed, with the following labels, "San Pedro de Jujuy, 27. 4. 26/Inst. Bac. Ent. nota 44/Shannon and Shannon" (INM; PRESENT DESIGNATION by O. H. Casal; the same specimen improperly designated as Holotype by García & Ronderos, 1963:32). BIONOMICS: Larvae in a temporary swampy area formed by rains.

53. Aedes (O.) raymondi Del Ponte, Castro & García, 1951. TYPE: Holotype ♀ (587), San Pedro (Jujuy), 27 Apr 1926, Shannon and Shannon (INM). BIONOMICS: [Larvae probably in temporary rain pools.]

*54. Aedes (O.) confirmatus (Lynch Arribálzaga, 1891) [=scapularis]. TYPE: Lectotype ♀, in good condition, with the following labels by F. Lynch, "Ochlerotatus cofirmatus [sic], F Lynch, Navarro [Buenos Aires]," May 1887 (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae in temporary rain pools.]

55. Haemagogus (Stegoconops) petrocchiae Martínez, Carcavallo & Prosen, 1961 (=ssp. of capricornii]. TYPE: Holotype ♂, Salvador Mazza (Pocitos), Departamento General San Martín (Salta), Jan 1960, Martínez and Carcavallo (BA). BIONOMICS: Females taken biting on human bait at dusk and at night in woods without artificial lights. [Larvae probably in treeholes.]

56. Haemagogus (Stegoconops) spegazzinii Brèthes, 1912. TYPE: Holotype ♀ [with the following labels, "No 7273/Jujuy/Haemagogus spegazzinii Brèthes" and 2 slides (3028), one with a wing and the other with genitalia, an antenna and a palpus], Jujuy, 1907, D. Carlos Spegazzini (BA). BIONOMICS: [Larvae probably in treeholes.] Adult(s) taken in deep woods.

57. Haemagogus (Stegoconops) uriartei Shannon & Del Ponte [=spegazzinii]. TYPE: Holotype ♂ (128-3) with genitalia slide (2353) and pupal skin slide (V 3), Vipos (Tucumán), 22 Mar 1927, Shannon and Del Ponte (USNM; see Stone and Knight, 1955:289). BIONOMICS: Holotype bred from larva in a treehole.

58. Culex (Lutzia) patersoni Shannon & Del Ponte, 1928 [=bigoti]. TYPE: Lectotype ♂ (2356) with genitalia slide, San Pedro (Jujuy), 27 Apr 1926, Shannon and Shannon (USNM; designation of Stone and Knight, 1957a:54). BIONOMICS: [Larvae in ground pools, rockholes and artificial containers.]

59. Culex (C.) ameliae Casal, 1967. TYPE: Holotype ♂, with associated larval and pupal skins (Ga 137-31), San Pedro-El Dorado road, about 10 km from San Pedro (Misiones), 11 Mar 1966, García and Casal (INM). BIONOMICS: Larvae in an extensive flooded depression in the middle of the forest crossed by the road.

60. Culex (C.) interfor Dyar, 1928 [=bidens]. TYPE: Lectotype ♂ (532) with genitalia slide (2364), in train between Tucumán and Jujuy (Jujuy, Salta or

Tucumán), 4 May 1927, M. Kisliuk Jr. (USNM; designation by Stone and Knight 1957a:51). BIONOMICS: [Larvae probably in permanent and semipermanent ground waters.] Adults taken at light on train.

61. Culex (C.) brethesi Dyar, 1919. TYPE: Holotype ♂ (on slide with the genitalia and a female) [San Isidro (Buenos Aires), Apr or May 1916] (BA). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

62. Culex (C.) castroi Casal & García, 1967. TYPE: Holotype ♂ with associated larval and pupal skins (Ga 289-11), Canal 6 and Paraná de las Palmas, Estación Agropecuaria Delta del I. N. T. A. (near Otamendi) (Buenos Aires), 27 July 1966, García and Casal (INM). BIONOMICS: Larvae in leaf axils of Eryngium sp.

*63. Culex (C.) dolosus (Lynch Arribálzaga, 1891). TYPE: Lectotype ♂, in very bad condition, partially covered by fungi, the head and the posterior abdominal segments missing, with the following label by F. Lynch, "Heteronycha dolosa n. sp.," no locality label, the following 5 localities given in the original description: Las Conchas, Zárate, Baradero, Navarro and Chacabuco (all Buenos Aires) (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Larvae in permanent and semipermanent ground waters.]

64. Culex (C.) bonariensis Brèthes, 1916 [=dolosus]. TYPE: Lectotype ♂, with type label but without locality label, and genitalia slide (V) [San Isidro (Buenos Aires)], May (BA; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: [Probably as for 63. dolosus.]

65. Culex (C.) eduardoi Casal & García, 1968. TYPE: Holotype ♂ with associated larval and pupal skins (Ga 314-17), Canal 6 and Paraná de las Palmas, Estación Agropecuaria Delta de I. N. T. A. (near Otamendi) (Buenos Aires), 10 Aug 1966, García and Casal (INM). BIONOMICS: Larvae in a marshy depression.

66. Culex (C.) fernandezi Casal, García and Cavalieri, 1966. TYPE: Holotype ♂ with associated larval and pupal skins (Ga 85-15), stream in Piquirenda (Salta), 26 Nov 1965, Fernandez, Hepper, García and Casal (INM). BIONOMICS: Larvae in axils of epiphytic or terrestrial bromeliads.

67. Culex (C.) hepperi Casal & García, 1967. TYPE: Holotype ♂ with associated larval and pupal skins (Ga 268-10), Canal 6 and Paraná de las Palmas, Estación Agropecuaria Delta de I. N. T. A. (near Otamendi) (Buenos Aires), 30 Apr 1966, García and Casal (INM). BIONOMICS: Larvae in leaf axils of Eryngium.

68. Culex (C.) lahillei Bachmann & Casal, 1962. TYPE: Holotype ♂ (1124) with genitalia slide (5219), Achiras (Córdoba), Mar 1938, Del Ponte (INM). BIONOMICS: [Larvae probably in permanent and semipermanent ground waters.]

69. Culex (C.) maxi Dyar, 1928. TYPE: Lectotype ♂ on slide 2360 and some legs on pin mount, San Pedro (Jujuy), 11 June 1927, M. Kisliuk Jr. (USNM; designation by Stone and Knight, 1957a:53). BIONOMICS: [Larvae in permanent and semipermanent ground waters.]

70. Culex (C.) autumnalis Weyenbergh, 1882 [=pipiens quinquefasciatus]. TYPE: ♂, ♀, larva, pupa, Río Primero (Córdoba) (?Universidad de Córdoba). BIONOMICS: [Larvae in large artificial containers and contaminated ground water.]

71. Culex (C.) saltanensis Dyar, 1928. TYPE: Holotype ♂, Campo Santo de Salta (Salta), 12 May 1927, M. Kisliuk Jr. (USNM). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

*72. Culex (Allimanta) tramazayguesi Duret, 1954. TYPE: Holotype ♂ (M.R. 110, E. 1), Monte Comán (Mendoza), 16 Dec 1953, Bejarano and Duret (CMPHM).

BIONOMICS: [Larvae found in hypersaline ground water near a thermal spring (Casal).]

73. Culex (Melanoconion) aliciae Duret, 1953. TYPE: Holotype ♂ (Mis. 13, E 8) with genitalia slide, Cerro Azúl, Arroyo San Juan (Misiones), 2 May 1949, Bejarano and Duret (CMPHM). BIONOMICS: [Larvae probably in stream pools or other permanent or semipermanent ground waters.]

74. Culex (Mel.) bejaranoi Duret, 1953. TYPE: Holotype ♂ (A. U. 93, E. 20) with genitalia slide, Bernardo de Irigoyen (Misiones), 18 Mar 1951, Duret (CMPHM). BIONOMICS: [Larvae found in large ground pool in a probably flooded forest (Casal).]

75. Culex (Mel.) intrincatus Brèthes, 1916. TYPE: Holotype ♂, lowlands of San Isidro (Buenos Aires), 15 May 1916, Brèthes (BA). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

76. Culex (Mel.) martinezi Casal & García, 1968. TYPE: Holotype ♂ with associated larval and pupal skins (Ga 418-17), km 34 of the Vespucio-San Pedrito road, near Vespucio (Salta), 6 Oct 1966, García, Hepper and Fernández (INM). BIONOMICS: Larvae taken at the margins of an arroyo.

77. Culex (Mel.) misionensis Duret, 1953. TYPE: Holotype ♂ (A.U. 23, E. 14) with genitalia slide, Aristóbulo del Valle (Misiones), 28 Feb 1951, Duret (CMPHM). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

78. Culex (Mel.) orfilai Duret, 1953. TYPE: Holotype ♂ (D.O 69, E. 20) with genitalia slide, Iguazú, Villa Tacuara (Misiones), 21 Nov 1951, Duret (CMPHM). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

79. Culex (Mel.) pavlovskyi Casal & García, 1967. TYPE: Holotype ♂ with genitalia slide (660331), Aeropuerto de Cambá Punta, near Corrientes (Corrientes), 4 Mar 1966, O. H. Casal (INM). BIONOMICS: Adults taken at a lighted window. [Larvae probably in permanent or semipermanent ground waters.]

80. Culex oblita (Lynch Arribálzaga, 1891) [NEW COMBINATION; NOMEN DUBIUM]. TYPE: Holotype ♂ [only a leg and a wing remain], Navarro, near Arroyo de las Saladas (Buenos Aires), Mar 1884 [F. Lynch] (BA).

81. Sayomyia australis (Shannon & Del Ponte, 1928). TYPE: Lectotype ♀, in good condition, with the following labels, "Ins. Bac. Ent. nota 195/Finca Santa Bárbara, 6.IV.27 Tuc.[umán, Departamento de la Capital]/R.C. Shannon coll & Del Ponte/Chaoborus australis Shannon & Del Ponte" (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: Adults collected at lights. [Larvae probably in permanent or semipermanent still ground waters.]

82. Sayomyia elnorae (Shannon & Del Ponte, 1928). TYPE: ♀, Tres Pozos, near Embarcación (Salta), E. S. Shannon (LU). BIONOMICS: Adults collected at light near a lake. [Larvae probably in lakes and other permanent and semipermanent still ground waters.]

83. Corethrella arborealis Shannon & Del Ponte, 1928 [=appendiculata]. TYPE: Holotype ♂ [(174) and wing slide (389)], Vipos [Tucumán], 4 Mar 1927, E. Del Ponte (INM). BIONOMICS: Holotype bred from pupa from treehole.

84. Corethrella puella Shannon & Del Ponte, 1928. TYPE: Lectotype ♀, in good condition, with the following labels, "Ledesma, Jujuy, 30.3.27/R.C. Shannon coll./Corethrella puella S & DP," the last label by Del Ponte (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: Adults collected in bathroom. [Larvae probably in permanent and semipermanent ground water with dense vegetation.]

85. Corethrella quadrivittata Shannon & Del Ponte, 1928. TYPE: Lectotype

♂, in very good condition, with the following labels, "Tres Pozos, Salta, 20.4. 27/Shannon & Shannon./Corethrella quadrivittata Shannon y Del Ponte," the last label by Shannon (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: Females taken at light near a lake. Larvae in aquatic vegetation (Pistia and others) in lakes.

86. Lutzomiops davisi (Shannon & Del Ponte, 1928). TYPE: Lectotype ♀, in fairly good condition, with the following labels, "Ins. Bac. Ent. nota 32-4/ Concepción, Tuc.[umán] 4.7.26/R.C. Shannon/390/Corethrella davisi Shannon & Del Ponte," the last label by Shannon (INM; PRESENT DESIGNATION by O. H. Casal). BIONOMICS: Larvae in a ground pool with semistagnant water and with vegetation at the margins.

87. Nothodixa atrovittata (Edwards, 1930). TYPE: Holotype ♂, Bariloche [San Carlos de Bariloche] (Río Negro), elev. 2450 ft, 25 Oct-1 Dec 1926, F. W. Edwards (BM). BIONOMICS: [Larvae probably in marginal vegetation or flotage in small creeks.]

88. Nothodixa nitida (Edwards, 1930). TYPE: Holotype ♂, Bariloche [San Carlos de Bariloche] (Río Negro), elev. 2450 ft, 25 Oct-1 Dec 1926, F. W. Edwards (BM). BIONOMICS: [Larvae probably in marginal vegetation or flotage in small creeks.]

89. Dixella argentina (Alexander, 1920). TYPE: Holotype ♂, La Granja, Alta Gracia (Córdoba), 1-8 Apr 1920, Charles Bruch (A). BIONOMICS: [Larvae probably in various types of permanent and semipermanent ground waters, especially at margins of small streams.]

List of Localities

BUENOS AIRES

[Locality not specified]: 38. Psorophora (P.) lynchi; 44. Psorophora (J.) bruchi; 48. Aedes (O.) lynchii.

Baradero: 1. Anopheles (A.) annulipalpis; 6. Anopheles (N.) albitarsis; 37. Aedeomyia squamipennis; 63. Culex (C.) dolosus.

Chacabuco: 63. Culex (C.) dolosus.

Las Conchas: 63. Culex (C.) dolosus.

Luján (Río): 34. Uranotaenia pulcherrima.

Navarro: 28. Coquillettidia (R.) fasciolata; 54. Aedes (O.) confirmatus (banks of Río Salado); 63. Culex (C.) dolosus.

Otamendi (Ingeniero Rómulo) (Canal 6 and Paraná de las Palmas, Estación Agropecuaria Delta de I. N. T. A.): 62. Culex (C.) castroi; 65. Culex (C.) eduardoi; Culex (C.) hepperi.

Paraná, Islas del (Tuyuparé, a brook in the delta of the Paraná): 18. Trichoprosopon (R.) paranensis; 22. Wyeomyia (M.) leontiniae; 42. Psorophora (J.) centrale.

San Isidro: 49. Aedes (O.) tapinops; 61. Culex (C.) brethesi; 64. Culex (C.) bonariensis; 75. Culex (Mel.) intrincatus (lowlands).

Tigre: 32. Uranotaenia nataliae (Río Las Conchas).

Zárate: 63. Culex (C.) dolosus.

CHACO

[Locality not specified]: 25. Phoniomyia mueblensi.

Resistencia: 31. Uranotaenia monilis; 35. Uranotaenia urania.

CORDOBA

Achiras: 68. Culex (C.) lahillei.
La Granja, Alta Gracia: 89. Dixella argentina.
Primero (Río): 70. Culex (C.) autumnalis.

CORRIENTES

[Locality not specified]: 10. Anopheles (N.) bachmanni.
Corrientes: 79. Culex (Mel.) pavlovskyi (Aeropuerto de Cambá Punta).

ENTRE RIOS

[Locality not specified]: 10. Anopheles (N.) bachmanni.

FORMOSA

[Locality not specified]: 10. Anopheles (N.) bachmanni; 16. Toxorhynchites (L.) separatus; 17. Toxorhynchites (L.) lynchi; 30. Uranotaenia lanei; 39. Psorophera (P.) holmbergii; 45. Psorophora (G.) confinnis.
San Jose: 21. Wyeomyia (Dav.) monoleua.

JUJUY

[Locality not specified]: 56. Haemagogus (S.) spegazzinii; 60. Culex (C.) interfor (on train between Tucumán and Jujuy).
Ledesma: 24. Wyeomyia (D.) typharum; 29. Coquillettidia (R.) araozi; 33. Uranotaenia capitis; 84. Corethrella puella (Cañitas Viejo).
San Pedro: 52. Aedes (O.) patersoni; 53. Aedes (O.) raymondi; 58. Culex (Lutzia) patersoni; 69. Culex (C.) maxi.
Santa Clara: 27. Sabethes (S.) neivai.
Zapla: 19. Wyeomyia (N.) lateralis.

MENDOZA

Monte Comán: 72. Culex (All.) tramazayguesi.

MISIONES

[Locality not specified, probably Cataratas del Iguazú]: 50. Aedes (O.) iguazu.
Aristóbulo del Valle: 77. Culex (Mel.) misionensis.
Bernardo de Irigoyen: 74. Culex (Mel.) bejaranoi.
Cataratas: 23. Wyeomyia (D.) belkini (20 km west of).
Cerro Azúl, Arroyo San Juan: 73. Culex (Mel.) aliciae.
Corpus, San Ignacio: 2. Anopheles (A.) holmbergi.
Iguazú (Cataratas del): 26. Limatus exhibitor.
Iguazú, Villa Tacuara: 78. Culex (Mel.) orfilai.
Puerto Iguazú: 13. Toxorhynchites (L.) cavalierii (50 m from Hostería Ruffino).
San Pedro: 59. Culex (C.) ameliae (10 km west of, on San Pedro-El Dorado road).

RIO NEGRO

San Carlos de Bariloche, 2450 ft: 87. Nothodixa atrovittata; 88. Nothodixa nitida.

SALTA

[Locality not specified]: 60. Culex (C.) interfor (on train between Tucumán and Jujuy).

Campo Santo de Salta: 71. Culex (C.) saltanensis.
Piquirenda: 66. Culex (C.) fernandezi.
Reserva Nacional "Finca del Rey," Departamento de Anta: 47. Aedes (O.) meprai.
Salvador Mazza (Pocitos), Departamento General San Martín: 55. Haemagogus (S.) petrocchiae.
San Lorenzo (Quebrada de), near Salta: 51. Aedes (O.) araozi.
Tres Pozos, near Embarcación: 12. Anopheles (N.) davisi; 36. Uranotaenia elnora; 43. Psorophora (J.) chaquensis; 46. Psorophora (G.) paulli; 82. Sayomyia elnorae; 85. Corethrella quadrivittata.
Vespucio: 76. Culex (Mel.) martinezi (km 34 of Vespucio-San Pedrito road).

SANTA FE
Tapenaga (Río), Colonia Florencia, Gran Chaco: 40. Psorophora (P.) aggoggylia; 41. Psorophora (P.) stigmatephora.

TUCUMAN
[Locality not specified]: 3. Anopheles (A.) argentinus; 5. Anopheles (A.) patersoni; 7. Anopheles (N.) rooti; 8. Anopheles (N.) evansae; 14. Toxorhynchites (L.) tucumanus; 60. Culex (C.) interfor (on train between Tucumán and Jujuy).
Concepción: 86. Lutzomiops davisi (on road 5 km W).
Lules: 15. Toxorhynchites (L.) arborealis.
Monteros: 9. Anopheles (N.) clarki.
Raco: 20. Wyeomyia (Dav.) petrocchiae.
Salí (Río): 4. Anopheles (A.) tucumanus.
Santa Bárbara (Finca), Departamento de la Capital: 11. Anopheles (N.) perezi; 81. Sayomyia australis.
Vipos: 57. Haemagogus (S.) uriartei; 83. Corethrella arborealis.

BOLIVIA

List of Species

1. Anopheles (Kerteszia) boliviensis Theobald, 1905. TYPE: Holotype ♀, Songo [Zongo] (La Paz), date not specified, M. Biró (BM). BIONOMICS: [Larvae probably in leaf axils of bromeliads.]

2. Toxorhynchites (Ankylorhynchus) hexacis (Martini, 1931). TYPE: Holotype ♀, Yungas de Coroico, Nor Yungas (La Paz), elev. 1000 m (NE). BIONOMICS: [Larvae probably in treeholes or leaf axils.]

3. Trichoprosopon (Ctenogoeldia) magnum (Theobald, 1905). TYPE: Holotype ♀, San Antonio [de Mapiri] (La Paz), M. Biró (HNM). BIONOMICS: [Larvae probably in leaf axils and flower bracts of Calathea or other Marantaceae.]

4. Mansonia (M.) fonsecai (Pinto, 1932) [=indubitans]. TYPE: Holotype ♀ (160), Los Naranjos [Naranjo] (Santa Cruz), 23 Feb 1925, O. da Fonseca (IOC). BIONOMICS: [Larvae probably attached to floating vegetation (Pistia) in ponds or lakes.]

5. Coquillettidia (Rhynchotaenia) nitens (Cerqueira, 1943). TYPE: Holotype ♀, Puerto Suárez, Chiquitos (Santa Cruz), July 1939 (IOC). BIONOMICS: [Larvae probably on rootlets of grasses and other herbaceous vegetation in mud or fine sediment in very shallow water on margins of swamps, ponds or lakes.]

6. Orthopodomyia bacigalupoi Martínez & Prosen, 1958 [=fascipes]. TYPE: Holotype ♂, Tacú, Buenavista, Ichilo (Santa Cruz), Apr 1955, A. Martínez and A. F. Prosen (BA). BIONOMICS: Larvae in treeholes.

7. Psorophora (Janthinosoma) circumflava Cerqueira, 1943. TYPE: Holotype ♀, Axiamas, Caupolican (La Paz), Dec 1941 (IOC). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds or streams.]

8. Psorophora (J.) melanota Cerqueira, 1943. TYPE: Holotype ♂, Riberalta, Terr. de Colonias (El Beni), Dec 1939 (IOC). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds or streams.]

9. Psorophora (Grabhamia) chiquitana Pinto, 1932 [=confinnis]. TYPE: Holotype ♀ (163), Los Naranjos [Naranjo] (Santa Cruz), 1925, O. da Fonseca (IOC). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds or streams.]

10. Psorophora (G.) dimidiata Cerqueira, 1943. TYPE: Holotype ♂, Lagunillas, Valle Grande (Santa Cruz), Feb 1940 (IOC). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds or streams.]

11. Aedes (Ochlerotatus) bejaranoi Martínez, Carcavallo & Prosen, 1960. TYPE: Holotype ♂, Yungas del Palmar, between km 90 and 110 on road from Cochabamba to Villa Tunari [San Antonio), Chapare (Cochabamba), elev. 3000-3900 m, Feb 1959, A. Martínez (BA). BIONOMICS: Larvae in pools of very cold, slowly flowing water and with dense vegetation and abundant filamentous algae. Adults of both sexes resting in vegetation on margins of pools.

12. Aedes (O.) oroecetor Martini, 1931 [=milleri]. TYPE: Lectotype ♂ with associated genitalia slide, Sorata (La Paz), elev. 2300 m (BM; designation of Mattingly, 1955:29). BIONOMICS: [Larvae probably in shaded stream bed pools with organic debris and surrounded by vegetation.]

13. Aedes (Howardina) aurivittatus Cerqueira, 1943. TYPE: Holotype ♀, Pampa Grande, Florida (Santa Cruz), Feb 1940 (IOC). BIONOMICS: [Larvae probably in leaf axils of bromeliads, possibly in treeholes.]

14. Aedes (H.) delpontei Martínez & Prosen, 1955. TYPE: Holotype ♂, between km 125 (Limbo, elev. 2000 m) and km 145 (Locotal, elev. 1200 m) on road from Cochabamba to Villa Tunari [San Antonio], Chapare (Cochabamba), Jan 1949, Feb 1952 or Nov 1953, A. Martínez and A. F. Prosen (BA). BIONOMICS: [Larvae probably in leaf axils of bromeliads, possibly in treeholes.]

15. Aedes (H.) vanemdeni Martini, 1931. TYPE: Lectotype ♂, Yungas de Coroico, Nor Yungas (La Paz), elev. 1000 m (BM; designation of Mattingly, 1955:31). BIONOMICS: [Larvae probably in leaf axils of bromeliads, possibly in treeholes.]

16. Haemagogus (Stegoconops) lindneri Martini, 1931 [=speggazzinii or uriartei]. TYPE: Holotype ♀, [?San José de] Chiquitos (Santa Cruz), Oct 1926 1926 (SMNS). BIONOMICS: [Larvae probably in treeholes.]

17. Culex (C.) alticola Martini, 1931. TYPE: Lectotype ♂, Serata [Sorata] (La Paz), elev. 2300 m, 19 Dec 1902 (BM; designation of Mattingly, 1955:31). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

18. Culex (C.) bidens Dyar, 1922. TYPE: Lectotype ♂ with genitalia slide (1687), Rosario, near Lago Rogagua (El Beni), Nov 1921, W. M. Mann (USNM, 25760; designation of Stone and Knight, 1957a:47). BIONOMICS: [Larvae probably in permanent and semipermanent ground waters.] Adults probably collected in forest islands in generally open country.

19. Edwardsops boliviensis Lane & Heredia, 1956. TYPE: Holotype ♀, El Paylon [El Pailon] (Santa Cruz), 5-6 Feb 1955, Travassos, Barros and Albuquerque (FH). BIONOMICS: [Larvae probably in permanent or semipermanent ground pools, possibly in treeholes.]

List of Localities

BENI (EL)
Riberalta: 8. Psorophora (J.) melanota.
Rosario, near Lago Rogagua: 18. Culex (C.) bidens.
San Antonio: (See under LA PAZ).

COCHABAMBA
Chapare Prov.; road from Cochabamba to Villa Tunari (San Antonio): 11. Aedes (O.) bejaranoi (Yungas del Palmar, between km 90 and 110; elev. 3000-3900 m); 14. Aedes (H.) delpontei (between km 125, elev. 2000 m, and km 145, elev. 1200 m).

LA PAZ
Axiamas, Caupolican Prov.: 7. Psorophora (J.) circumflava.
Coroico (Yungas de) elev. 1000 m, Nor Yungas Prov.: 2. Toxorhynchites (A.) hexacis; 15. Aedes (H.) vanemdeni.
San Antonio de Mapiri: 3. Trichoprosopon (Ctenogoeldia) magnum.
Sorata: 12. Aedes (O.) oroecetor; 17. Culex (C.) alticola.
Zongo (Songo): 1. Anopheles (K.) boliviensis.

SANTA CRUZ
Buenavista (Tacú), Ichilo Prov.: 6. Orthopodomyia bacigalupoi.
Chiquitos (?San José de), Agua retirada, Chiquitos Prov.: 16. Haemagogus (S.) lindneri.
Lagunillas, Valle Grande Prov.: 6. Psorophora (G.) dimidiata.
Naranjo (Los Naranjos): 4. Mansonia (M.) fonsecai; 9. Psorophora (G.) chiquitana.
Pailón (El): 19. Edwardsops boliviensis.
Pampa Grande, Flórida Prov.: 13. Aedes (H.) aurivittatus.
Puerto Suárez, Chiquitos Prov.: 5. Mansonia nitens.

CHILE

List of Species

1. Anopheles (A.) neghmei Mann, 1950 [ssp. of pseudopunctipennis]. TYPE: Holotype ♂, Quebrada de Miñemiñe (Tarapacá), elev. 1800 m, Feb-Mar or June 1946, G. Mann F. (Inst. Biol. "Juan Noe," Santiago, A-1). BIONOMICS: Larvae in natural and artificial ground waters.

2. Anopheles (A.) noei Mann, 1950 [ssp. of pseudopunctipennis]. TYPE: Holotype ♂, Oasis of Suca (Tarapacá), elev. 1330 m, Feb-Mar or June 1946, G. Mann F. (Inst. Biol. "Juan Noe," Santiago, A-32). BIONOMICS: Larvae primarily in irrigation waters.

3. Anopheles (Nyssorhynchus) pictipennis Philippi, 1865. TYPE: 2♂; Santiago (Santiago), July 1859; Aconcagua province, Sept 1863 (NE). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

4. Anopheles (N.) bigotii Theobald, 1901 [=pictipennis]. TYPE: Holotype ♀, locality not specified, 1894, J.M.F. Bigot (NE). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

5. Anopheles (N.) variegatus (E. Blanchard, 1852); chilensis (R. Blan-

chard, 1905), nom. nov. [=pictipennis]. TYPE: Lectotype ♀, Arquero [Arqueros?] (MNHP; designation of Belkin, 1968:10). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

6. Psorophora marmorata (Philippi, 1865) [identity doubtful]. TYPE: 2 ♂, 1 ♀, locality not specified (NE). BIONOMICS: [Larvae probably in ground pools.]

7. Aedes (Ochlerotatus) flavipes (Macquart, 1838) [=?albifasciatus]. TYPE: Holotype ♀, Concepción (Concepción), no other data (MNHP). BIONOMICS: [Larvae probably in temporary ground pools or flooded margins of ponds or streams.]

8. Aedes (O.) annuliferus (E. Blanchard, 1852) [=?albifasciatus]. TYPE: Lectotype ♀, probably from vicinity of Coquimbo or Illapel (Coquimbo) (MNHP; designation of Belkin, 1968:4). BIONOMICS: [Larvae probably in temporary ground pools or flooded margins of ponds or streams.]

9. Aedes (O.) vittatus (Philippi, 1865); philipii Dyar, 1924, new name [=?albifasciatus]. TYPE: 2 ♀, Santiago (Santiago), no other data (NE). BIONOMICS: [Larvae probably in temporary ground pools or flooded margins of ponds or streams.]

10. Aedes (O.) colonarius Dyar, 1924 [=?albifasciatus]. TYPE: Holotype ♀, Azapa Valley (Tarapacá), June 1912, C.E. Porter (USNM). BIONOMICS: [Larvae probably in temporary ground pools or flooded margins of streams.]

11. Culex (C.) annuliventris (E. Blanchard, 1852) [A distinct species]. TYPE: Lectotype ♂, possibly from Valdivia (Valdivia) (MNHP; designation of Belkin, 1968:13). BIONOMICS: [Larvae in permanent or semipermanent ground waters.]

12. Culex (C.) apicinus Philippi, 1865. TYPE: Adult, near Santiago (Santiago), no other data (NE). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters, ponds or streams.]

13. Culex (C.) articularis Philippi, 1865. TYPE: Original material from near Corral (Valdivia) all lost (NE); neotype ♂, Casa Pangue (Llanquihue), Dec 1926, R. and E. Shannon (USNM, RB 62 #554; designation of Bram, 1967:30). BIONOMICS: [Larvae in permanent or semipermanent ground waters.]

14. Culex (C.) serotinus Philippi, 1865 [=pipiens complex]. TYPE: ♂, ♀, Santiago (Santiago) and Valdivia (Valdivia), no other data (NE). BIONOMICS: [Larvae probably in ground waters contaminated with domestic wastes or in large artificial containers.]

15. Nothodixa chilensis (Alexander, 1913). TYPE: Holotype ♂, Concepción (Concepción), 23 Aug 1904, P. Herbst (NE). BIONOMICS: [Larvae probably in vegetation or flotage on margins of streams, rivulets, seepages and springs.]

16. Nothodixa ensifera (Edwards, 1930). TYPE: Holotype ♂, Casa Pangue (Llanquihue), elev. about 1000 ft, 4-10 Dec 1926, F. W. Edwards (BM). BIONOMICS: [Larvae probably in vegetation or flotage on margins of streams, rivulets, seepages and springs.]

List of Localities

[NOT SPECIFIED]

Locality and province not specified, probably near Santiago or Valparaíso: 4. Anopheles (N.) bigotii; 6. Psorophora marmorata.

ACONCAGUA

[Locality not specified]: 3. Anopheles (N.) pictipennis (also Santiago).

CONCEPCION
Concepción: 7. Aedes (O.) flavipes; 15. Nothodixa chilensis.

COQUIMBO
Arqueros: 5. Anopheles (N.) variegatus.
Coquimbo: 8. Aedes (O.) annuliferus (also Illapel).
Illapel: 8. Aedes (O.) annuliferus (also Coquimbo).

LLANQUIHUE
Casa Pangue, frontier station on Chilean side of Rosales Pass, altitude of house about 1000 ft: 13. Culex (C.) articularis; 16. Nothodixa ensifera.

SANTIAGO
Santiago: 3. Anopheles (N.) pictipennis (also Aconcagua Prov.); 9. Aedes (O.) vittatus; 14. Culex (C.) serotinus (also Valdivia).
See also [NOT SPECIFIED].

TARAPACA
Azapa Valley: 10. Aedes (O.) colonarius.
Miñemiñe, Quebrada de: 1. Anopheles (A.) neghmei.
Suca, Oasis of: 2. Anopheles (A.) noei.

VALDIVIA
Corral: 13. Culex (C.) articularis.
Valdivia: 11. Culex (C.) annuliventris; 14. Culex (C.) serotinus (also Santiago).

PARAGUAY

List of Species

1. Phoniomyia fuscipes (Edwards, 1922). TYPE: Lectotype ♀, unspecified locality in Paraguay, probably Asunción (Asunción), Fiebrig (BM; designation of Belkin, 1968:24). BIONOMICS: [Larvae probably in leaf axils of bromeliads.]

2. Psorophora (P.) pallescens Edwards, 1922. TYPE: Lectotype ♂ with attached genitalia mount, unspecified locality in Paraguay, probably Asunción (Asunción), Fiebrig (BM; designation of Belkin, 1968:28). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds and streams.]

3. Psorophora (Janthinosoma) purpurascens Edwards, 1922 [=cyanescens]. TYPE: Holotype ♀, locality and date not specified, probably Asunción (Asunción), Fiebrig (HNM). BIONOMICS: [Larvae probably in sunlit temporary ground pools.]

4. Psorophora (J.) fiebrigi Edwards, 1922 [=ferox]. TYPE: Lectotype ♂ with attached genitalia mount, unspecified locality in Paraguay, probably Asunción (Asunción), Fiebrig (BM; designation of Belkin, 1968:26). BIONOMICS: [Larvae probably in temporary ground pools in wooded or shaded areas.]

5. Psorophora (J.) paraguayensis (Strickland, 1911) [=varipes]. TYPE: Holotype ♀, Puerto Max (Boquerón), Jan-Apr 1905, Vezényi (NE). BIONOMICS: [Larvae probably in temporary pools in wooded or shaded areas.]

6. Psorophora (Grabhamia) varinervis Edwards, 1922. TYPE: Holotype ♀, locality and date not specified, probably Asunción (Asunción), Fiebrig (HNM).

BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds and streams.]

7. Aedes (Ochlerotatus) stigmaticus Edwards, 1922. TYPE: Lectotype ♀, Asunción (Asunción), 1904, Vezényi (BM; designation of Belkin, 1968:7). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds and streams.]

List of Localities

ASUNCION

[Locality not specified, probably vicinity of Asunción]: 1. Phoniomyia fuscipes; 2. Psorophora (P.) pallescens; 3. Psorophora (J.) purpurascens; 4. Psorophora (J.) fiebrigi; 6. Psorophora (G.) varinervis.

Asunción: 7. Aedes (O.) stigmaticus.

BOQUERON

Puerto Max: 5. Psorophora (J.) paraguayensis.

PERU

List of Species

1. Anopheles (Stethomyia) acanthotorynus Komp, 1937. TYPE: Holotype ♂ with genitalia slide, Iquitos (Loreto), Apr 1931, R. C. Shannon (USNM, 52020). BIONOMICS: [Larvae probably in deeply shaded stream bed pools.]

2. Anopheles (A.) peruvianus Tamayo, 1907 [=pseudopunctipennis]. TYPE: ♂, ♀, Huacachina (Ica), San Pedro de Lloc (La Libertad), Lima, summer and fall, Chanchamayo (LU). BIONOMICS: [Larvae probably in various small, sunlit, permanent and semipermanent ground waters with algae.]

3. Trichoprosopon (T.) subsplendens (Martini, 1931) [=digitatum]. TYPE: Holotype ♀, Pt. Bermudas [Bermudez], Pichis [Río] (Pasco), 10/12.03 (NE). BIONOMICS: [Larvae probably in treeholes, cut bamboo or plant parts on the ground.]

4. Trichoprosopon (Runchomyia) hyperleucum (Martini, 1931). TYPE: Holotype ♀, Urubamba River (Cuzco) (NE). BIONOMICS: [Larvae probably in treeholes, cut bamboo, plant parts on the ground, or in the leaf axils and/or flower bracts of Araceae, Marantaceae, Musaceae or bromeliads.]

5. Aedes (Ochlerotatus) epinolus Dyar & Knab, 1914 [=taeniorhynchus]. TYPE: Lectotype ♀, Ventanillas (Cajamarca), 4 Feb 1914, C. H. T. Townsend (USNM, 18362; designation of Stone and Knight, 1956a:217). BIONOMICS: [Larvae probably in coastal saltmarshes or freshwater pools near the sea.]

6. Haemagogus (Stegoconops) obscurescens Martini, 1931 [=anastasionis]. TYPE: Lectotype ♀, Ucayali River (Loreto) (BM; designation of Mattingly, 1955: 28). BIONOMICS: [Larvae probably in treeholes or cut bamboo.]

7. Culex (C.) debilis (Dyar & Knab, 1914) [=apicinus]. TYPE: Lectotype ♂ with genitalia and 3 legs on slides (597, 598), Matucan [Matucana] (Lima), elev. 7300 ft, June-July 1913, C. T. Brues (USNM, 18361; designation of Stone and Knight, 1957a:47). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

8. Culex (C.) escomeli Brèthes, 1920 [=apicinus]. TYPE: ♂, ♀, Arequipa (BA). BIONOMICS: [Probably as for 7. debilis.]

9. Culex (C.) archegus Dyar, 1929. TYPE: Holotype ♂, Tarma (Junín), elev. 10,000 ft, 13 July 1928, R.C. Shannon (USNM). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

10. Culex (C.) diplophyllum Dyar, 1929. TYPE: Lectotype ♂ with genitalia slide (2398), Verrugas Canyon (Lima), 5 Apr 1928, R.C. Shannon (USNM; designation of Stone and Knight, 1957a:47). BIONOMICS: [Larvae probably in permanent or semipermanent ground waters.]

11. Culex (C.) raymondii Tamayo, 1907 [=pipiens quinquefasciatus]. TYPE: ♂, ♀, larva, pupa, Huacachina (Ica) (LU). BIONOMICS: [Larvae probably in ground waters contaminated with domestic wastes or in large artificial containers.]

12. Corethrella inca Lane, 1939 [=ananacola]. TYPE: Holotype ♀, Iquitos (Loreto), Mar-Apr 1931, R.C. Shannon (FH). BIONOMICS: [Larvae probably in leaf axils of bromeliads, possibly Ananas magdalenae.]

13. Corethrella maculata Lane, 1939. TYPE: Holotype ♂, Iquitos (Loreto), Mar-Apr 1931, R.C. Shannon (FH). BIONOMICS: [Larvae probably in ground waters, possibly in leaf axils or treeholes.]

14. Lutzomiops peruviana (Lane, 1939). TYPE: Holotype ♀, Iquitos (Loreto), Mar-Apr 1931, R.C. Shannon (FH). BIONOMICS: [Larvae probably in swamps.]

15. Lutzomiops shannoni (Lane, 1939). TYPE: Holotype ♂, Iquitos (Loreto), Mar-Apr 1931, R.C. Shannon (USNM). BIONOMICS: Larvae in a swamp.

16. Dixella andeana (Lane, 1942). TYPE: Holotype ♂, Iquitos (Loreto), Mar-Apr 1931, R.C. Shannon (USNM). BIONOMICS: [Larvae probably on margins of small streams or permanent or semipermanent ground pools.]

17. Dixella peruviana (Edwards, 1931). TYPE: Holotype ♂, Verrugas (Lima), 5 May 1928, R.C. Shannon (BM). BIONOMICS: [Larvae probably on margins of small streams or springs.]

List of Localities

AREQUIPA

[Locality not specified]: 8. Culex (C.) escomeli.

CAJAMARCA

Ventanillas: 5. Aedes (O.) epinolus.

CUZCO

Urubamba (Río): 4. Trichoprosopon (R.) hyperleucum.

ICA

Huacachina: 2. Anopheles (A.) peruvianus (also San Pedro de Lloc (La Libertad) and Lima); 11. Culex (C.) raymondii.

JUNIN

Tarma: 9. Culex (C.) archegus.

LA LIBERTAD

San Pedro de Lloc: 2. Anopheles (A.) peruvianus (also Huacachina (Ica) and Lima).

LIMA

[Locality not specified, probably vicinity of Lima]: 2. Anopheles (A.) peruvians (also Huacachina (Ica) and San Pedro de Lloc, La Libertad).

Matucuna: 7. Culex (C.) debilis.

Verrugas: 10. Culex (C.) diplophyllum (Verrugas Canyon); 17. Dixella peruviana.

LORETO

Iquitos: 1. Anopheles (S.) acanthotorynus; 12. Corethrella inca; 13. Corethrella maculata; 14. Lutzomiops peruviana; 15. Lutzomiops shannoni; 16. Dixella andeana.

Ucayali (Río): 6. Haemagogus (S.) obscurescens.

PASCO

Puerto Bermudez, Río Pichis: 3. Trichoprosopon (T.) subsplendens.

URUGUAY

List of Species

1. Psorophora (Grabhamia) leucocnemis Martini, 1931 [?=varinervis]. TYPE: Holotype ♀, Montevideo (Montevideo), 19 Mar 1927, Vogelsang coll. 8846 (BM). BIONOMICS: [Larvae probably in temporary ground pools or overflows of ponds or streams.]

REFERENCES CITED

Belkin, John N.
1968. Mosquito Studies (Diptera, Culicidae). IX. The type specimens of New World mosquitoes in European museums. Amer. Entomol. Inst., Contrib. 3(4). 69 p.

Belkin, John N., R. X. Schick and S. J. Heinemann
1965. Mosquito Studies (Diptera, Culicidae). V. Mosquitoes originally described from Middle America. Amer. Entomol. Inst., Contrib. 1(5): 1-95.
1966. Mosquito Studies (Diptera, Culicidae). VI. Mosquitoes originally described from North America. Amer. Entomol. Inst., Contrib. 1(6): 1-39.

Bram, Ralph A.
1967. Classification of Culex subgenus Culex in the New World. U. S. Nat. Mus., Proc. 120:1-122.

Castro, Manuel and M. Bressanello
1952. Revisión de las especies de Taeniorhynchus (Rhyncotaenia) (Dipt. Cul.). Rev. Brasil. Biol., Rio de Janeiro 12:229-246.

García, Miguel and R. A. Ronderos
(1962) 1963. Sobre la validez de Aedes (Ochlerotatus) patersoni Shannon y del Ponte, 1927 (Diptera-Culicidae). Soc. Entomol. Argent., Rev., Buenos Aires 25:29-33.

Peters, T. Michael
1968. Mosquito Studies (Diptera, Culicidae). X. Dixinae originally described

from North America. Amer. Entomol. Inst., Contrib. 4(1):1-7.

Stone, Alan and K. L. Knight

1955. Type specimens of mosquitoes in the United States National Museum: I. The genera Armigeres, Psorophora and Haemagogus (Diptera, Culicidae). Wash. Acad. Sci., J. 45:282-289.

1956. Type specimens of mosquitoes in the United States National Museum: III. The genera Anopheles and Chagasia (Diptera, Culicidae). Wash. Acad. Sci., J. 46:276-280.

1957a. Type specimens of mosquitoes in the United States National Museum: IV. The genus Culex (Diptera, Culicidae). Wash. Acad. Sci., J. 47:117-126.

1957b. Type specimens of mosquitoes in the United States National Museum: V. The Sabethini (Diptera, Culicidae). Wash. Acad. Sci., J. 47: 117-126.

1957c. Type specimens of mosquitoes in the United States National Museum: VI, Miscellaneous genera, addenda, and summary. Wash. Acad. Sci., J. 47:196-202.

Umana, A.C., R.L. Heredia and J.C. Siquot

1959. Estudios sobre el Anopheles (N.) albitarsis en la Argentina (Nota previa). Primeras Jornadas Entomoepidemiológicas Argentinas, Buenos Aires, part 2, p. 609-618.

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